

kilowatts at the same location and radiation center of the KAIT-TV NTSC facility.²

Principal Community Coverage

As the proposed DTV facility is co-located with the existing KAIT-TV NTSC facility and full-replication of coverage is requested, the principal community coverage requirement of Section 73.625(a) is clearly achieved.

Interference Considerations

According to the Commission's minimum separation distance table in Section 73.623(d), only one station is short-spaced to the proposed DTV allotment on Channel 9, WKNO(TV) on Channel 10 at Memphis. The required minimum separation distance from each station is less than 17.4 kilometers or greater than 146.4 kilometers. The actual separation distance is 129.7 kilometers. Therefore, the short-spacing is 16.7 kilometers from WKNO(TV) to the proposed KAIT-TV Channel 9 DTV facility. An interference analysis has only been completed to the short-spaced station.

Using the procedure outline in OET Bulletin 69, the new interference to WKNO(TV) is determined. According to our calculations, the amount of new, or unique, interference to WKNO(TV) occurs over approximately 27.4

² The KAIT-TV NTSC facility on Channel 8 is located at 35° 53' 17" North Latitude, 90° 56' 09" West Longitude. The antenna radiation center is 610 meters above mean sea level and the height above average terrain is 533 meters.

square kilometers (km^2) which contains approximately 127 people. Figure 1 shows the service contour of the proposed KAIT-TV DTV facility and the Grade B contour of WKNO(TV). Also shown is the existing interference area (dots) which mask most of the DTV interference areas (cross-hatching). The only new interference occurs in Craighead and Poinsett counties in Arkansas. A county breakdown of the population and households is shown on Figure 2. The population values are based on the 1990 U.S. Census of Housing and Population.

According to Appendix B, *DTV Table of Allotments*, contained in the Commission's Sixth Report and Order, *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, the existing WKNO(TV) NTSC interference-free service area is $24,952 \text{ km}^2$ containing a population of 1,276,000 persons. The new interference area of approximately 27.4 km^2 with 127 people represents 0.1 percent and 0.01 percent of the existing WKNO(TV) land area and population, respectively.

WKNO(TV) at Memphis is an educational broadcast station. It is noted that another educational broadcast station, KTEJ(TV) on Channel 19, is licensed to Jonesboro. Figure 1 shows the City Grade (80 dBu) coverage contour for KTEJ(TV). As can be seen, the KTEJ(TV) City Grade contour completely encompasses the new interference area.

Planned KAIT-TV DTV Facilities

It is noted that the KAIT-TV DTV allotment on Channel 58 is short-spaced to three proposed stations or allotments which include two pending applications for

construction permit for an educational Channel 56 allotment at Memphis, Tennessee.³ The KAIT-TV Channel 58 DTV allotment is also short-spaced to an allocation for Channel 58 at Kennett, Missouri.

According to our calculations, the FCC planned KAIT-TV Channel 58 DTV allotment would cause interference to approximately 2,590 persons over 235 km² to one of the Memphis, Channel 56 pending applications (BPET-970331LE). To the other short-spaced pending application (BPET-961211KK), approximately 2,475 persons over 251 km² would receive interference from the planned KAIT-TV DTV allotment.

The FCC required minimum separation distance from a DTV Channel two channels away from an NTSC channel is less than 24.1 kilometers or greater than 96.6 kilometers. This actual separation distance to BPET-970331LE and BPET-961211KK is 82.0 kilometers. Therefore, a short-spacing of 14.6 kilometers occurs between the planned KAIT-TV Channel 58 DTV allotment and two pending application for construction permit for the educational Channel 56 allotment at Memphis.

Interference Calculation Methodology

The interference prediction method employed for the herein calculations are based on the Commission's OET Bulletin 69 and the software provided by the Commission.

³ The two short-spaced applications for the educational Channel 56 allotment at Memphis are BPET-961211KK and BPET-970331LE.

The terrain elevations and the associated Longley-Rice field strength values are calculated at one-kilometer intervals for both the desired and undesired stations with an assumed receiver antenna elevated 10 meters above ground level.⁴ The appropriate desired-to-undesired interference ratios were employed with consideration to the off-axis receiving antenna discrimination, where pertinent. An analog receiver antenna radiation pattern with azimuthal discrimination calculated as the fourth power to the cosine of the angle between the desired and undesired stations with a appropriate front-to-back ratios was employed. The Commission's recommendations of the appropriate input parameters of the Longely-Rice propagation model were also used.



Charles A. Cooper

August 20, 1997

du Treil, Lundin & Rackley, Inc.
240 North Washington Blvd., Suite 700
Sarasota, Florida 34236
941.366.2611

⁴ The ground elevations were derived from the three-second terrain database.

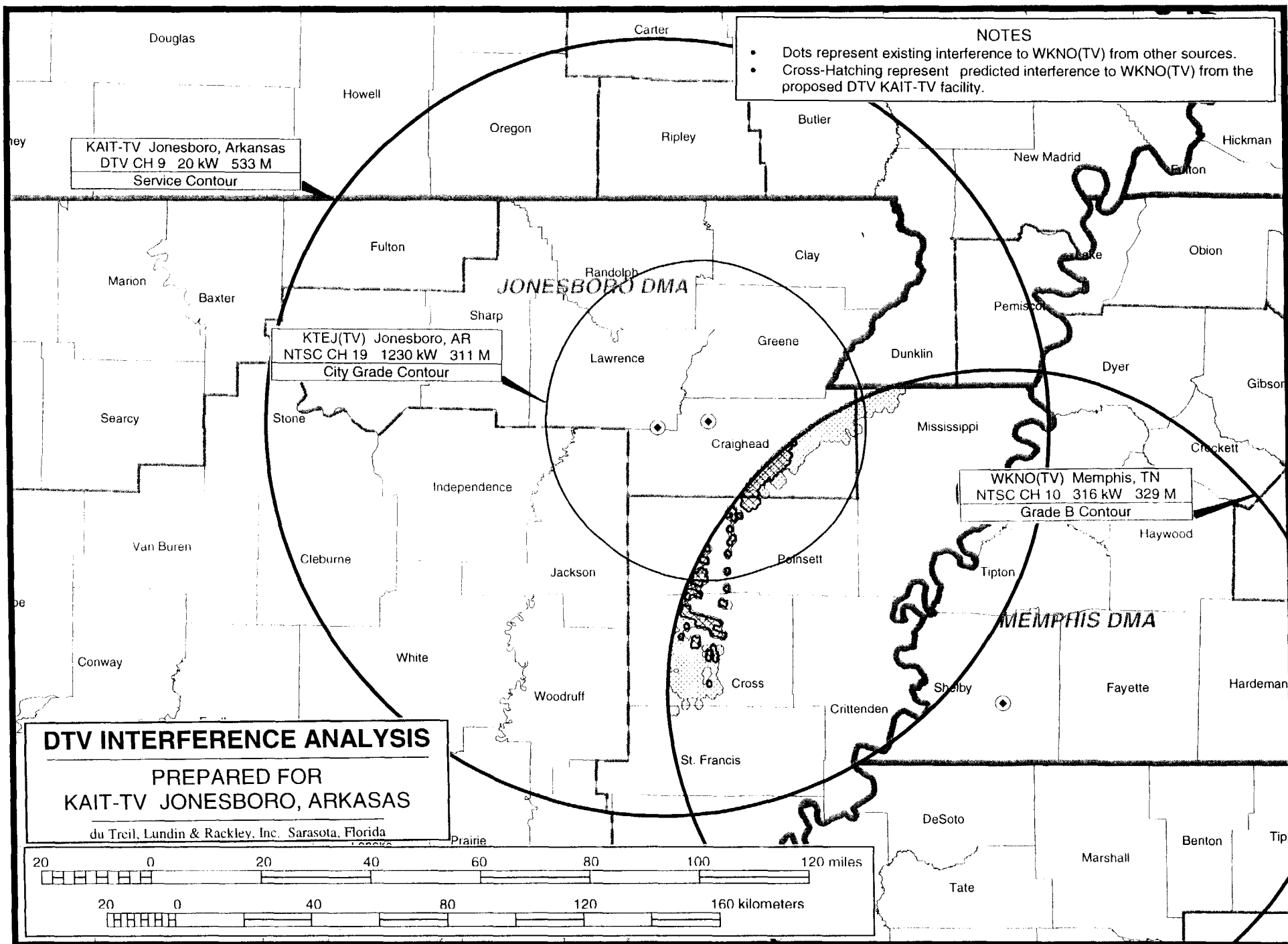


Figure 1

TECHNICAL EXHIBIT
DTV CHANNEL SUBSTITUTION
KAIT-TV JONESBORO, ARKANSAS

Tabulation of New Interference from Proposed DTV Facility

<u>Station</u>	<u>County</u>	<u>Total County</u>		<u>New Interference¹</u>		
		<u>Population</u>	<u>Households</u>	<u>Population</u>	<u>Households</u>	<u>Area (km²)</u>
WKNO (TV)	Craighead, AR	68,959	26,322	25	10	8.0
Memphis, TN	Poinsett, AR	24,664	9,473	<u>102</u>	<u>39</u>	<u>19.4</u>
			Total:	127	49	27.4

¹ Calculations are approximate.



Box 790 • 472 CRAIG 766
Jonesboro, Arkansas 72403
501-931-8888
General Fax: 501-931-1371
News Fax: 501-933-8058

August 18, 1998

To: Steve Smith

Fm: Clyde Anderson

Re: County Ratings - Poinsett, AR, 9,020 Total Households
62% Cable Homes

In looking at the newly released A.C. Nielsen county coverage study for 1997 I found the following information.

This study covers information gathered from the previous rating periods from April 25, 1996 through February 26, 1997. The figures gathered are an average of all retabulation of NSI Household Audience data from all four DMA measurements.

The study covers several broad day parts and deals only in household viewing and share of market viewing for those specific dayparts.

In looking specifically at Poinsett, a county with only 9,020 total homes, we found the following information:

The educational television station WKNO had an average quarter hour audience, Monday-Sunday, 7AM-1AM, of only 104 homes or a 3% share of the total television sign on to sign off viewing.

In looking at specific daypart we find that in critical afternoon news and primetime viewing areas (5PM-7PM) that they had no measurable audience numbers.

In the daytime hours from 9AM-3PM the rating book allocated approximately 16 homes to the average quarter hour viewing audience.

The one thing the book does not define is whether the numbers assigned to WKNO are the same homes or cumulative homes.

A further examination of the same rating book reveals that the Arkansas Educational television station in Craighead county reaches approximately 165 homes on an average quarter hour viewing as compared to WKNO's

16 homes.

In those dayparts where WKNO has no viewers, KTEJ, the Arkansas educational station reaches a peak of 152 homes in the average quarter hour of viewing.

In those critical early fringe time periods where KAIT-TV reaches its peak viewing of approximately of anywhere from 2,700 to 2,800 homes WKNO reaches a zero. KTEJ reaches a peak of 152 homes. WKNO has its largest specific day audience after 10:30PM Monday - Friday of 429 homes. Remembering that this is out of a possible 9,020 homes in the county and that their average quarter hour SO to SO is only 104 homes.

Also it is important to remember that the county is 62% cable wired and a large portion of the viewing households will be able to receive their signal without any interference.

The Arkansas educational television station out performs the Memphis WKNO station in five of eight daypart summaries.



Clyde

ATTACHMENT F

KPLC(TV)—Lake Charles, Louisiana

- 1. Technical Exhibit**
- 2. Manager's Statement**

DTV CHANNEL SUBSTITUTION
KPLC-TV LAKE CHARLES, LOUISIANA

KPLC-TV on NTSC Channel 7 at Lake Charles, Louisiana is requesting the substitution of the FCC assigned DTV channel. KPLC-TV is requesting DTV Channel 8 in lieu of the assigned DTV Channel 53. Pursuant to the Commissions Public Notice, KPLC-TV is providing an analysis of the proposed substitution Channel considering OET Bulletin 69, "Longley-Rice Methodology for Evaluating TV Coverage and Interference."

Based on the DTV separation distances contained in Section 73.623(d) of the Rules, KPLC-TV can substitute DTV Channel 8 for Channel 53 and meet all the required separation distances except to two stations: (1) KNOE-TV at on Channel 8 at Monroe, Louisiana and (2) KUHT(TV) on Channel 8 at Houston. However, as demonstrated below, minimal new interference is predicted to the above stations from the herein proposed KPLC-TV DTV facility.

Proposed KPLC-TV DTV Facilities

The proposed KPLC-TV DTV facility on Channel 8 proposes full-replication of the existing NTSC Channel 7 facility. The proposed Zone III non-directional DTV average effective radiated power to achieve full-

replication is 17 kilowatts at the same location and radiation center of the KPLC-TV NTSC facility.¹

Principal Community Coverage

As the proposed DTV facility is co-located with the existing KPLC-TV NTSC facility and full-replication of coverage is requested, the principal community coverage requirement of Section 73.625(a) is clearly achieved.

KNOE-TV Interference Considerations

According to the Commission's minimum separation distance table in Section 73.623(d), KNOE-TV on Channel 8 at Monroe is short-spaced to the proposed DTV allotment on Channel 8. The required minimum separation distance from each station is 273.6 kilometers. The actual separation distance is 218.5 kilometers. Therefore, the short-spacing is 55.1 kilometers from KNOE-TV to the proposed KPLC-TV Channel 11 DTV facility. An interference analysis has been completed to KNOE-TV.

Using the procedure outline in OET Bulletin 69, the new interference to KNOE-TV is determined. According to our calculations, the amount of new, or unique, interference to KNOE-TV occurs over approximately 4,050 square kilometers (km²) which contains approximately 119,027 people. Figure 1 shows the service contour of the proposed

¹ The KPLC-TV NTSC facility on Channel 7 is located at 30° 23' 43" North Latitude, 93° 00' 08" West Longitude. The antenna radiation center is 459 meters above mean sea level and the height above average terrain is 451 meters.

KPLC-TV DTV facility and the Grade B contour of KNOE-TV. Also shown is the existing interference area (dots) which mask some of the DTV interference areas (cross-hatching). A county breakdown of the population and households is shown on Figure 2. The population values are based on the 1990 U.S. Census of Housing and Population.

According to Appendix B, *DTV Table of Allotments*, contained in the Commission's Sixth Report and Order, *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, the existing KNOE-TV NTSC interference-free service area is 41,193 km² containing a population of 688,000 persons. The new interference area of approximately 119,027 people represents 17.3 percent of the existing KNOE-TV population.

KUHT(TV) Interference Considerations

KUHT(TV) on Channel 8 at Houston, Texas is short-spaced to the proposed KPLC-TV DTV allotment. The required minimum separation distance from each station is 273.6 kilometers. The actual separation distance is 257.1 kilometers. Therefore, the short-spacing is 16.5 kilometers from KUHT(TV) to the proposed KPLC-TV Channel 8 DTV facility.

According to our calculations, the amount of new, or unique, interference to KUHT(TV) occurs to approximately 12,481 persons over 1,300 km². Figure 3 shows the service contour of the proposed KPLC-TV DTV facility and the Grade B contour of KUHT(TV). The DTV interference areas are shown by the cross-hatching. A county breakdown of the population and households is shown on Figure 4.

The existing KUHT(TV) NTSC interference-free service area is 37,240 km² containing a population of 3,850,000 persons, according to the Commission's Sixth Report and Order. The new interference area with approximately 12,481 people represents only 0.3 percent of the existing KUHT(TV) population.

Interference Calculation Methodology

The interference prediction method employed for the herein calculations are based on the Commission's OET Bulletin 69 and the software provided by the Commission. The terrain elevations and the associated Longley-Rice field strength values are calculated at one-kilometer intervals for both the desired and undesired stations with an assumed receiver antenna elevated 10 meters above ground level.² The appropriate desired-to-undesired interference ratios were employed with consideration to the off-axis receiving antenna discrimination, where pertinent. An analog receiver antenna radiation pattern with azimuthal discrimination calculated as the fourth power to the cosine of the angle between the desired and undesired stations with a appropriate front-to-back ratios was employed. The Commission's recommendations of the appropriate input parameters of the Longely-Rice propagation model were also used.



Charles A. Cooper

² The ground elevations were derived from the three-second terrain database.

TECHNICAL EXHIBIT
DTV CHANNEL SUBSTITUTION
KPLC-TV LAKE CHARLES, LOUISIANA

Tabulation of New Interference to KNOE-TV from Proposed DTV Facility

<u>County</u>	<u>Total County</u>		<u>New Interference¹</u>	
	<u>Population</u>	<u>Households</u>	<u>Population</u>	<u>Households</u>
Avoyelles Parish	39,159	13,423	4,720	1,618
Bienville Parish	15,979	5,899	2,072	765
Catahoula Parish	11,065	3,979	34	12
Claiborne Parish	17,405	6,040	212	74
Grant Parish	17,526	6,196	9,615	3,399
La Salle Parish	13,662	5,088	44	16
Lincoln Parish	41,745	13,693	18	6
Natchitoches Parish	36,689	12,602	27,534	9,457
Rapides Parish	131,556	45,782	72,146	25,107
Red River Parish	9,387	3,341	1785	635
Webster Parish	41,989	15,859	236	89
Winn Parish	16,269	5,776	611	217

¹ Calculations are approximate.

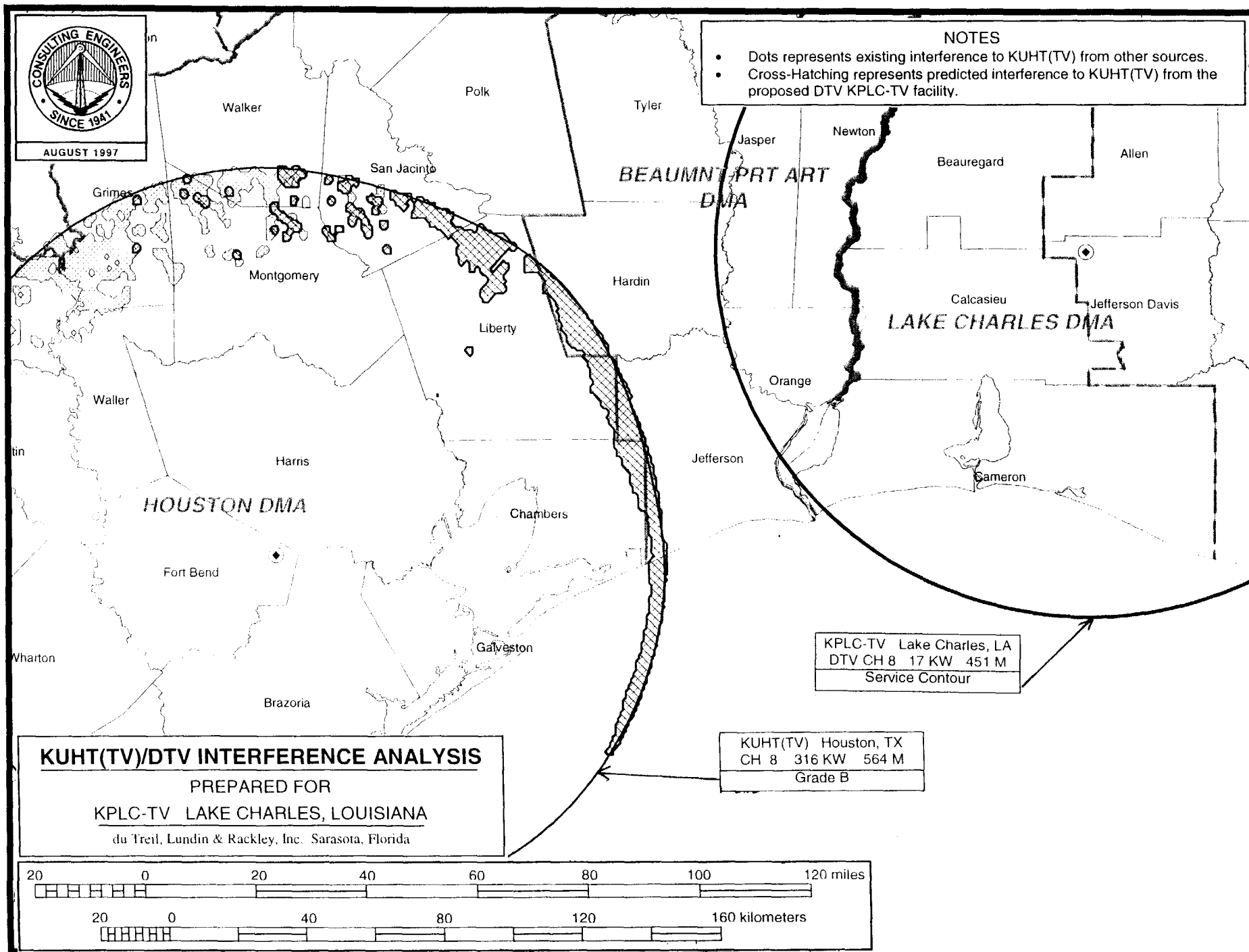


Figure 3

TECHNICAL EXHIBIT
DTV CHANNEL SUBSTITUTION
KPLC-TV LAKE CHARLES, LOUISIANA

Tabulation of New Interference to KUHT(TV) from Proposed DTV Facility

<u>County</u>	<u>Total County</u>		<u>New Interference¹</u>	
	<u>Population</u>	<u>Households</u>	<u>Population</u>	<u>Households</u>
Chambers, TX	20,088	6,915	4,517	1,555
Hardin, TX	41,320	14,739	916	327
Jefferson, TX	239,397	90,403	880	332
Liberty, TX	52,726	18,491	1,949	684
Montgomery, TX	182,201	63,676	151	53
San Jacinto, TX	16,372	6,192	3,900	1,475
Walker, TX	50,917	14,914	168	49

¹ Calculations are approximate.



Inter-Office Memo

Date **August 21, 1997**
To **Steve Smith**
From **Jim Serra**
Subject **KPLC DTV Ch. 8 - Interference with KUHT Houston**

Per your request, I have reviewed the interference map from Charles Cooper showing where a Channel 8 DTV assignment for KPLC would interfere with the existing NTSC Channel 8 signal transmitted by KUHT-TV, the PBS station in Houston, Texas.

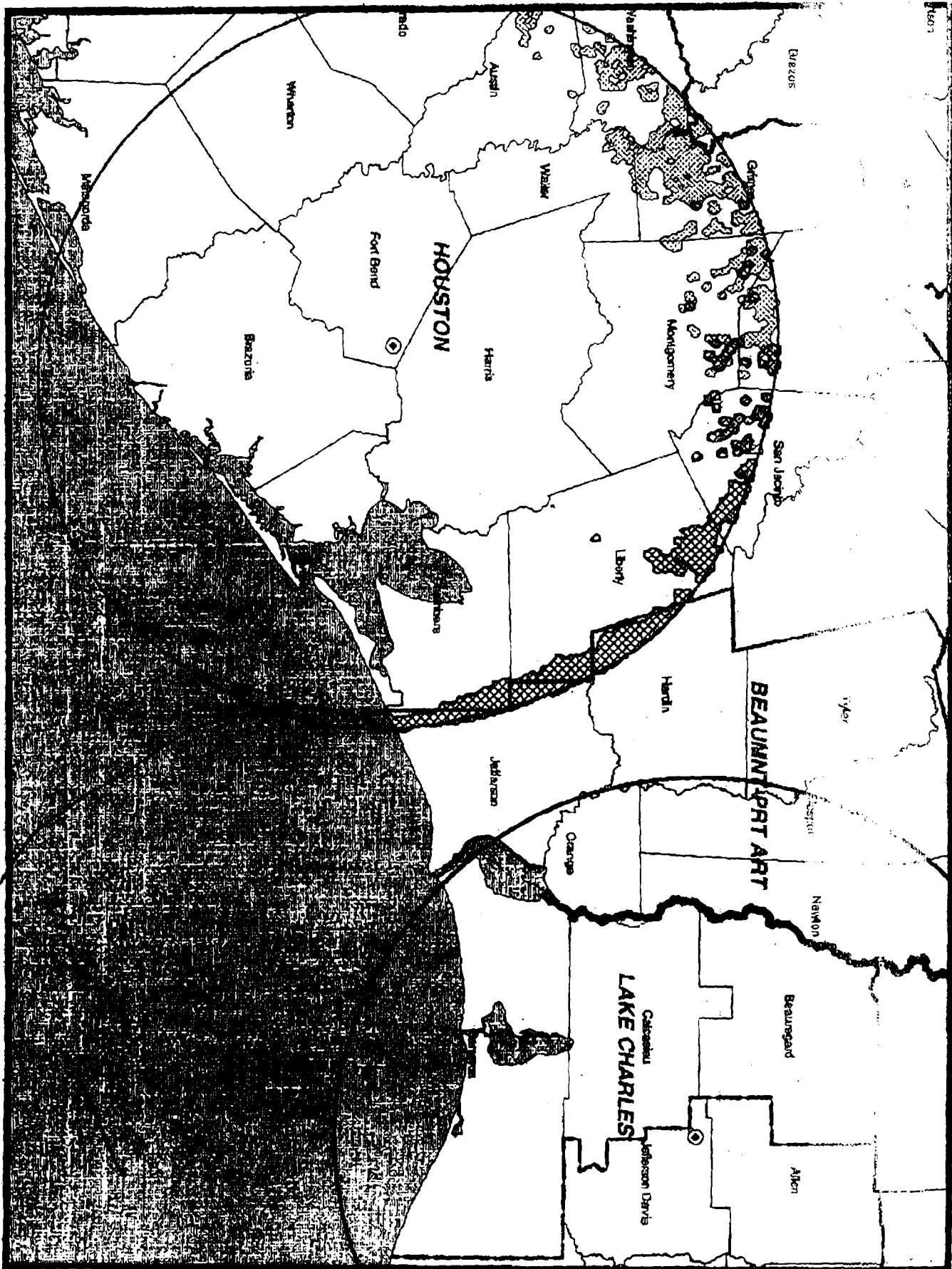
The map shows interference in the extreme western fringes of Jefferson and Hardin counties, the extreme eastern fringes of Chambers and Liberty counties, and fragments of San Jacinto, Montgomery, Walker and Grimes counties.

The first four aforementioned counties are assigned to the Beaumont (TX) DMA; the rest are in the Houston DMA. KUHT serves as the local PBS station for all of these counties, since the Beaumont market does not have a PBS television station.

However, in a recent telephone conversation, KUHT's CEO and GM Jeff Clarke advised me that he would support KPLC's seeking of a Channel 8 DTV assignment on the condition that KPLC would agree to repack to Channel 7 upon surrender of its NTSC license. Jeff indicated that KUHT is seeking DTV Channel 9, and has a similar arrangement with an NTSC Channel 9 transmitting from Lufkin, TX. Jeff's phone number is 713.748.8888.

A handwritten signature, likely of Jim Serra, consisting of a stylized 'J' and 'S'.

Attachment





Inter-Office Memo

Date **August 20, 1997**
To **Steve Smith**
From **Jim Serra**
Subject **KPLC DTV Ch. 8 - Interference with KNOE Monroe**

This memo and attachments are for the purpose of showing that a DTV channel 8 assignment for KPLC would not interfere with the existing KNOE (CBS, Monroe, LA) NTSC Channel 8 signal in way which would be detrimental to audience service nor KNOE's ability to conduct business.

An analysis of KNOE's existing NTSC contour and a KPLC DTV Channel 8 contour from our existing tower site (per Charles Cooper's Interference map) combined with current Nielsen audience survey data supports the following arguments:

ARGUMENT #1: A KPLC DTV CHANNEL 8 SIGNAL WOULD NOT IMPACT KNOE OR ITS AUDIENCE WITHIN THE MONROE DMA.

Charles' map shows interference with KNOE in only the tiniest corners of three Monroe DMA parishes: Catahoula, Concordia and Winn. These are outlying parishes with small populations, as indicated by attached NSI Monroe market data report. Moreover, the population that does reside in each of these parishes is specifically not found in the small geographic slivers in which KPLC's DTV Channel 8 signal would interfere with KNOE's NTSC signal.

The few square miles of interference indicated in the southern tips of Catahoula and Concordia lands directly in the Catahoula National Wildlife Refuge. The even smaller patch of interference in southwest Winn Parish falls directly over the Kisatchie National Forest. Because Nielsen does not tell us how many raccoons and nutria actually own television sets, we can't determine the impact the interference would have on sentient beings living in these areas.

However, even if these creatures do watch TV, they only receive a grade "B" NTSC signal from KNOE, and can easily tune to CBS affiliates in Baton Rouge, Lafayette or Shreveport for a Murphy Brown fix of equal or superior technical quality.

2-2-2-2-2-2-2

In short, KPLC would simply not interfere with KNOE nor negatively impact audience service to any viewers in the Monroe DMA.

ARGUMENT #2: A KPLC DTV CHANNEL 8 SIGNAL WOULD HAVE NEGLIGIBLE IMPACT ON KNOE, AND WOULD HAVE NO IMPACT ON AUDIENCE SERVICE, OUTSIDE THE MONROE DMA.

Outside of the Monroe DMA, KPLC would only interfere with KNOE's signal in areas where KNOE has either no viewership or is grossly subordinate in levels of viewership to CBS affiliates in Lafayette or Shreveport.

The attached grid reflects television households and viewership levels in Avoyelles, Rapides, Natchitoches and Red River parishes where interference would occur. The first two parishes look to Shreveport's KSLA as their primary CBS affiliate; the next two look to Lafayette's KLFY as their primary CBS affiliate.

In each case, throughout the broadcast day, KNOE is a distant second choice for network programming, and ranges from insignificant to a complete no-show in the time periods in which affiliates program local news, weather and sports.

All four of these parishes are located on the very fringe of KNOE's grade "B" NTSC signal. In fact, KNOE's signal only reaches one-half of each parish's geographic area or less, the remaining viewers being completely unserved by KNOE.

A final argument in favor of a KPLC DTV Channel 8 assignment: Each of the parishes mentioned in this memo is at risk from severe weather, not limited to hurricanes and tropical storms, which travels north from the Gulf of Mexico. Northward spiralling storms cause the most damage to the east of the eyewall or its remnants.

Each of these parishes would be most severely impacted by a northward tropical system which entered the state at its southwest corner. KPLC is the only station located in this region, and serves its viewers with three staff meteorologists and the latest weather tracking, warning and display equipment.

3-3-3-3-3-3-3-3

The case can, and should, be made that the viewers in question would be better served if they could receive a digital signal providing information from Lake Charles regarding deadly weather travelling in their direction. This is by no means hypothetical: one need look back only a few years when Hurricane Andrew cut a path of destruction north through Louisiana from an entry point south of Lafayette. At such critical times, viewers desperately look for the latest and most accurate information, and such information is best provided by coastal stations such as KPLC.



**xc: Jim Keelor
Charles Cooper
Scott Patrick**

Attachments

TO: JIM SERRA
FR: JOHN SCOTT/T. PEARIS
RE: DTV - CHANNEL 8 (KNOE/MONROE-ELDORADO - NTSC IMPACT)
DT: 8/19/97

1. The following areas are parishes where the KPLC/DTV-8 would impact the KNOE NTSC signal

CBS affiliates providing service					
Parishes	KNOE	WAFB	KLPY	KSLA	DMA
Avoyelles	X	X			Alexandria
Natchitoches	X			X	Shreveport-Texarkana
Rapides	X		X		Alexandria
Red River				X	Shreveport-Texarkana
Catahoula	X				Monroe-ElDorado
Concordia	X	X			Monroe-ElDorado
Winn	X			X	Monroe-ElDorado

2. The following is an analysis of the audience breakdown in the parishes where KNOE is impacted:

NUMBER OF HOUSEHOLDS											
Parishes	M-F 8a-4p 9a-3p KNOE	Competitor	M-F 4-6p 3-5p KNOE	Competitor	M-F 6-730p 5-630p KNOE	Competitor	M-Su Prime KNOE	Competitor	M-F 1130p-1a 1030p-12m KNOE	Competitor	Parish TV HH
Avoyelles	7	145	8	674	0	817	78	284	0	89	13,700
Natchitoches	341	940	82	1,039	84	1,517	264	1,121	0	364	12,800
Rapides	458	1,300	470	848	98	186	1,186	2,108	91	245	43,820
Red River	n/a	151	n/a	310	n/a	835	n/a	348	n/a	91	3,110
Catahoula	738	0	261	0	492	0	376	0	128	0	3,920
Concordia	1,414	4	310	106	1,327	19	1,080	6	106	0	7,110
Winn	819	238	386	30	936	171	851	181	70	57	6,200
KNOE/Competitor:											
Number HH	3,876	2,786	1,524	2,807	2,965	3,545	3,818	4,033	393	836	90,680
Percentage	3.94%	3.07%	1.56%	3.10%	3.27%	3.91%	4.21%	4.46%	0.43%	0.92%	

ATTACHMENT G

WLOX(TV)—Biloxi, Mississippi

1. Technical Exhibit